Index to Volume 187

α subunit transfection, Na^+/K^+ pump expression in the L8 rat myogenic cell line: effects of heterologous 366
α-smooth, regulation of muscle actin and CRBP-1 expression by retinoic acid and TGF-β in cultured fibroblasts 315

A

Adapter protein Tvl-1, Tpl-2 induces apoptosis by promoting the assembly of protein complexes that contain caspase-9, the and procaspase-3 176
Alam, Mahmood. See Zaugg, Michael 90
Alcantara, O. See Gazitt, Y 124
Aldolase B requires glutamine 111 in a signal sequence for chaperone-mediated transport, Starvation-induced lysosomal degradation of 48
Almond-Roesler, Brigitte. See Krasagakis, Konstantin..... 386
Alnemri, Emad S. See Patriotis, Christos 176
Anabolic-androgenic steroids induce apoptotic cell death in adult rat ventricular myocytes 90
Andreutti, Daniele. See Xu, Guoxiong 315
Andrews, Carrie J. See Kitten, Allison M..... 218
Angiotensin II type1 receptor regulation and differential trophic effects on rat cardiac myofibroblasts after acute myocardial infarction 326
Aquilina, Gabriele, and Margherita Bignami. Mismatch repair in correction of replication errors and processing of DNA damage 145
Arachidonic acid metabolites, Stimulation of DNA synthesis by tumor promoters in primary rat hepatocytes is not mediated by 336
ATP and cytoskeleton in the regulation of Na^+/H^+ exchanger along the nephron luminal membrane, Roles of 109
Auzenne, E. See Leroux, E..... 256

B

Badger, Alison M. See Kumar, Sanjay..... 294
Bak, Asia. See Sharabani-Yosef, Orna..... 365
Banno, Yoshiko. See Osawa, Yosuke 374
Bellacosa, Alfonso. Role of *MED1* (*MBD4*) gene in DNA repair and human cancer..... 137
Bennett, Jessica M. See Raafat, Ahmed M..... 81
Bignami, Margherita. See Aquilina, Gabriele..... 145
BMP-7, Endothelin-1 expression in long-term cultures of fetal rat calvarial osteoblasts: regulation by 218
Bochaton-Piallat, Marie-Luce. See Xu, Guoxiong..... 315
Boisvert, Francois-Michel. See Wheaton, Keith 226
Boldt, D.H. See Gazitt, Y 124
Borrelli, M.J. See VanderWaal, R.P 236
Brandstätter, Katja. See Staufenberger, Sibylle 326
Brunette, Michèle G. See Pellerin, Isabelle..... 109
Bush, Peter G., and Andrew C. Hall. Regulatory volume decrease (RVD) by isolated and in situ bovine articular chondrocytes 304

C

C2C12 Myoblasts, Insulin signaling leading to proliferation, survival, and membrane ruffling in 96
Caplan, Arnold I. See Lennon, Donald P 345
Caspase-9, The adapter protein Tvl-1, and procaspase-3, Tpl-2 induces apoptosis by promoting the assembly of protein complexes that contain 176
Catenins, Requirement of protein kinase Cα, extracellular matrix remodeling, and cell–matrix interaction for transforming growth factorβ-regulated expression of E-cadherin and 188
Caveolae during senescence of human fibroblasts, Loss of functional 226
Cellular signaling, Nitric oxide chemistry and 277
Chakrabarty, Subhas. See Wang, Hongmei 188
Chatzaki, Ekaterini. See Krasagakis, Konstantin 386
Cheng, Aiwu. See Xia, Xianmin 209
Chloride conductance in mouse fibroblasts, Cell cycle-related changes in regulatory volume decrease and volume-sensitive 65
Chondrocytes, Regulatory volume decrease (RVD) by isolated and in situ bovine articular 304
Chorna, Nataliya E. See Santiago-Pérez, Laura I..... 196
Claveau, David. See Pellerin, Isabelle 109
Colorectal carcinoma cells, Growth inhibition due to complementation of *transforming growth factor-β receptor type II*-defect by human chromosome 3 transfer in human 356
Conejo, Ruben and Margarita Lorenzo. Insulin signaling leading to proliferation, survival, and membrane ruffling in C2C12 myoblasts 96
CRBP-1 expression by retinoic acid and TGF-β in cultured fibroblasts, Regulation of α-smooth muscle actin and 315
Cytoskeleton in the regulation of Na^+/H^+ exchanger along the nephron luminal membrane, Roles of ATP and 109

D

Dachs, Gabi U. See Greco, Olga 22
Davy, Alice. See Wheaton, Keith 226
Decorin expression, Matrix metalloproteinase expression by endothelial cells in collagen lattices changes during coculture with fibroblasts and upon induction of 37
D-Galactosamine-induced sensitization against tumor necrosis factor-α–induced hepatocyte apoptosis, Possible involvement of reactive oxygen species in 374
Dijke, Peter Ten. See Inagaki, Yutaka..... 117
DNA damage, Mismatch repair in correction of replication errors and processing of 145
DNA synthesis by tumor promoters in primary rat hepatocytes is not mediated by arachidonic acid metabolites, Stimulation of 336
Donato, N.J. See Leroux, E..... 256
Doroshenko, N. See Doroshenko, P..... 65
Doroshenko, P., V. Sabanov, and N. Doroshenko. Cell cycle-related changes in regulatory volume decrease and volume-sensitive chloride conductance in mouse fibroblasts..... 65
Dunn Jr., W.A. See Susan, P.P. 48

E

Ebinuma, Hirotoshi. See Nakamura, Mitsuyasu 392
Ebp1, an ErbB-3 binding protein, interacts with Rb and affects Rb transcriptional regulation 209
E-Cadherin and catenins, Requirement of protein kinase Cα, extracellular matrix remodeling, and cell–matrix interaction for transforming growth factorβ-regulated expression of 188
Edmison, John M. See Lennon, Donald P..... 345
Edwards, Anthony M. See Lee, Chow H..... 336
Ekokoski, Elina, Tania E. Webb, Joseph Simon, and Kid Törnquist. Mechanisms of P2 receptor-evoked DNA synthesis in thyroid FRTL-5 cells..... 166
Endothelin-1 expression in long-term cultures of fetal rat calvarial osteoblasts: regulation by BMP-7 218
Engelke, David R. See Xiao, Shaohua 11
Enzyme/prodrug therapy of cancer: historical appraisal and future prospectives, Gene directed 22
Erb, Laurie. See Santiago-Pérez, Laura I..... 196
Ertl, Georg. See Staufenberger, Sibylle..... 326
Estrogen and estrogen plus progestin act directly on the mammary gland to increase proliferation in a postmenopausal mouse model 81
Eukaryotic ribonuclease P: increased complexity to cope with the nuclear pre-tRNA pathway 11

F

Fibroblasts, Loss of functional caveolae during senescence of human 226
Fimmel, Sabine. See Krasagakis, Konstantin..... 386
Flores, Rosa V. See Santiago-Pérez, Laura I..... 196

G

Gabbiani, Giulio. See Xu, Guoxiong 315
Garrad, Richard C. See Santiago-Pérez, Laura I 196
Gazitt, Y., S.V. Reddy, O. Alcantara, J. Yang, and D.H. Boldt. A new molecular role for iron in regulation of cell cycling and differentiation of HL-60 human leukemia cells: iron is required for transcription of p21(WAF1/CIP1) in cells induced by phorbol myristate acetate. 124
Geilen, Christoph. See Krasagakis, Konstantin 386
Gene directed enzyme/prodrug therapy of cancer: historical appraisal and future prospectives 22
Gilotti, Albert C. See Savage, Joyce M 283
Glutamine 111 in a signal sequence for chaperone-mediated transport, Starvation-induced lysosomal degradation of aldolase B requires 48
González, Fernando A. See Santiago-Pérez, Laura I 196
Gow, Andrew J. and Harry Ischiropoulos. Nitric oxide chemistry and cellular signaling 277
Gowen, Maxine. See Kumar, Sanjay 294
Granzow, Catherine A. See Savage, Joyce M 283
Gravanis, Achille. See Krasagakis, Konstantin 386
Greco, Olga, and Gabi U. Dachs. Gene directed enzyme/prodrug therapy of cancer: historical appraisal and future prospectives 22
Greenwel, Patricia. See Inagaki, Yutaka 117
Griffith, C.L. See VanderWaal, R.P 236
Growth inhibition due to complementation of *transforming growth factor-β receptor type II*-defect by human chromosome 3 transfer in human colorectal carcinoma cells 356

H

Hafner, Mathias. See Staufenberger, Sibylle 326
Halevy, Orna. See Shefer, Gavriela 73
Hall, Andrew C. See Bush, Peter G 304
Hamburger, Anne W. See Xia, Xianmin 209
Haslam, Sandra Z. See Raafat, Ahmed M. 81
Hemmi, Hiromichi. See Miyafuji, Yasunori 356
Heparin receptor slow cell proliferation and decrease MAPK activation in vascular smooth muscle cells, Antibodies against a putative 283
Hepatic stellate cells, Constitutive phosphorylation and nuclear localization of Smad3 are correlated with increased collagen gene transcription in activated 117
Histone deacetylase inhibitor, Reduction of telomerase activity in human liver cancer cells by a 392
HL-60 human leukemia cells: iron is required for transcription of p21(WAF1/CIP1) in cells induced by phorbol myristate acetate, A new molecular role for iron in regulation of cell cycling and differentiation of 124
Hofseth, Lorne J. See Raafat, Ahmed M 81
Houser-Scott, Felicia. See Xiao, Shaohua 11
Hurley, Bernard R. See Karkanis, Tom 244
Hyperthermia enhance TNF-induced necrosis of murine L929 fibrosarcoma cells via caspase-regulated production of reactive oxygen intermediates, Febrile and acute 256

I

IL-1- and TNF-induced bone resorption is mediated by p38 mitogen activated protein kinase 294
Imose, Motoaki. See Osawa, Yosuke 374
Inagaki, Yutaka, Mizuko Mamura, Yutaka Kanamaru, Patricia Greenwel, Tomoyuki Nemoto, Kazuhiko Takehara, Peter Ten Dijke, and Atsuhito Nakao. Constitutive phosphorylation and nuclear localization of Smad3 are correlated with increased collagen gene transcription in activated hepatic stellate cells 117
Inoue, Hirofumi. See Miyazono, Kohei 265
Insulin signaling leading to proliferation, survival, and membrane ruffling in C2C12 myoblasts 96
Irintchev, Andrey. See Shefer, Gavriela 73
Iron in regulation of cell cycling and differentiation of HL-60 human leukemia cells: iron is required for transcription of p21(WAF1/CIP1) in cells induced by phorbol myristate acetate, A new molecular role for 124
Ischiropoulos, Harry. See Gow, Andrew J. 277
Ishii, Hiromasa. See Nakamura, Mitsuyasu 392

J

Jacobs, Martina. See Staufenberger, Sibylle 326
Jamali, Nasir Z. See Zaugg, Michael 90
Jiao, Yang. See Karkanis, Tom 244

K

Kanamaru, Yutaka. See Inagaki, Yutaka 117
Karkanis, Tom, Yang Jiao, Bernard R. Hurley, Shaohua Li, J. Geoffrey Pickering, and Stephen M. Sims. Functional receptor-channel coupling compared in contractile and proliferative human vascular smooth muscle 244
Kitten, Allison M. and Carrie J. Andrews. Endothelin-1 expression in long-term cultures of fetal rat calvarial osteoblasts: regulation by BMP-7 218
Klostergaard, J. See Leroux, E 256
Koi, Minoru. See Miyafuji, Yasunori 356
Krasagakis, Konstantin, Brigitte Almond-Roesler, Christoph Geilen, Sabine Fimmel, Sven Krengel, Ekaterini Chatzaki, Achille Gravanis, and Constantin E. Orfanos. Growth and characterization of a cell line from a human primary neuroendocrine carcinoma of the skin (merkel cell carcinoma) in culture and as xenograft 386
Krengel, Sven. See Krasagakis, Konstantin 386
Krugh, Brent. See Santiago-Pérez, Laura I 196
Kresse, Hans. See Schönherr, Elke 37
Kumar, Sanjay, Bartholomew J. Votta, David J. Rieman, Alison M. Badger, Maxine Gowen, and John C. Lee. IL-1- and TNF-induced bone resorption is mediated by p38 mitogen activated protein kinase 294
Kusanagi, Kiyoshi. See Miyazono, Kohei 265

L

Laser irradiation: a role for the MAPK/ERK pathway, Skeletal muscle cell activation by low-energy 73
Leclerc, Marie. See Pellerin, Isabelle 109
Lee, Chow H. and Anthony M. Edwards. Stimulation of DNA synthesis by tumor promoters in primary rat hepatocytes is not mediated by arachidonic acid metabolites 336
Lee, John C. See Kumar, Sanjay 294
Lennon, Donald P., John M. Edmison, and Arnold I. Caplan. Cultivation of rat marrow-derived mesenchymal stem cells in reduced oxygen tension: effects on in vitro and in vivo osteochondrogenesis 345
Leroux, E., E. Auzenne, D. Weidner, Z.Y. Wu, N.J. Donato, and J. Klostergaard. Febrile and acute hyperthermia enhance TNF-induced necrosis of murine L929 fibrosarcoma cells via caspase-regulated production of reactive oxygen intermediates 256
Lessor, Tracy. See Xia, Xianmin 209
Li, Shaohua. See Karkanis, Tom 244
Li, Songjiang. See Raafat, Ahmed M 81
Lin, Jun-Hsiang. See Patriotis, Christos 176
Lorenzo, Margarita. See Conejo, Ruben 96
Low, Robert B. See Xu, Guoxiong 315
Lowe-Krentz, Linda J. See Savage, Joyce M. 283
Lucchinetti, Eliana. See Zaugg, Michael 90

M

Mailloux, Johanne. See Pellerin, Isabelle 109
Makris, Antonios. See Patriotis, Christos 176
Mamura, Mizuko. See Inagaki, Yutaka 117

MAPK activation in vascular smooth muscle cells, Antibodies against a putative heparin receptor slow cell proliferation and decrease 283
MAPK/ERK pathway, Skeletal muscle cell activation by low-energy laser irradiation: a role for the 73
Markova, Dessislava Z. See Patriotis, Christos 176
Matrix metalloproteinase expression by endothelial cells in collagen lattices changes during co-culture with fibroblasts and upon induction of decorin expression 37
MED1 (*MBD4*) gene in DNA repair and human cancer, Role of 137
(Merkel cell carcinoma) in culture and as xenograft, Growth and characterization of a cell line from a human primary Neuroendocrine carcinoma of the skin 386
Mesenchymal stem cells in reduced oxygen tension: effects on in vitro and in vivo osteochondrogenesisin, Cultivation of rat marrow-derived 345
Mismatch repair in correction of replication errors and processing of DNA Damage 145
Mitogen-activated protein kinases, $P2Y_2$ nucleotide receptor signaling in human monocytic cells: activation, desensitization and coupling to 196
Miyafuji, Yasunori, Xiaoling Zhong, Iichiro Uchida, Minoru Koi, and Hiromichi, Hemmi. Growth inhibition due to complementation of *transforming growth factor-β receptor type II*-defect by human chromosome 3 transfer in human colorectal carcinoma cells 356
Miyazono, Kohei, Kiyoshi Kusanagi, and Hirofumi Inoue. Divergence and convergence of TGF-β/BMP signaling ... 265
Molina, Felix. See Savage, Joyce M 283
Moriwaki, Hisataka. See Osawa, Yosuke 374
Murine L929 fibrosarcoma cells via caspase-regulated production of reactive oxygen intermediates, Febrile and acute hyperthermia enhance TNF-induced necrosis of ... 256
Myocardial infarction, Angiotensin II type1 receptor regulation and differential trophic effects on rat cardiac myofibroblasts after acute 326
Myocytes, Anabolic-androgenic steroids induce apoptotic cell death in adult rat ventricular 90

N

Na^+/H^+ exchanger along the nephron luminal membrane, Roles of ATP and cytoskeleton in the regulation of 109
Na^+/K^+ pump expression in the L8 rat myogenic cell line: effects of heterologous α-subunit transfection 365
Nagaki, Masahito. See Osawa, Yosuke 374
Nakamoto, Nobuhiro. See Nakamura, Mitsuyasu 392
Nakamura, Mitsuyasu, Hidetsugu Saito, Hirotoshi Ebinuma, Kanji Wakabayashi, Yoshimasa Saito, Tamako Takagi, Nobuhiro Nakamoto, and Hiromasa Ishii. Reduction of telomerase activity in human liver cancer cells by a histone deacetylase inhibitor 392
Nakao, Atsuhito. See Inagaki, Yutaka 117
Nakashima, Shigeru. See Osawa, Yosuke 374
Nemoto, Tomoyuki. See Inagaki, Yutaka 117
Neuroendocrine carcinoma of the skin (merkel cell carcinoma) in culture and as xenograft, Growth and characterization of a cell line from a human primary 386
Neuville, Pascal. See Xu, Guoxiong 315
Nir, Uri. See Sharabani-Yosef, Orna 365
Nitric oxide chemistry and cellular signaling 277
Nitric oxide synthase pathways, Pleiotrophin induces angiogenesis: involvement of the phosphoinositide-3 kinase but not the 59
Nozawa, Yoshinori. See Osawa, Yosuke 374

O

O'Connell, Brian C. See Schönherr, Elke 37
Orfanos, Constantin E. See Krasagakis, Konstantin 386
Oron, Uri. See Shefer, Gavriela 73
Osawa, Yosuke, Masahito Nagaki, Yoshiko Banno, Yasuhiro Yamada, Motoaki Imose, Yoshinori Nozawa, Hisataka Moriwaki, and Shigeru Nakashima. Possible involvement of reactive oxygen species in D-galactosamine–induced sensitization against tumor necrosis factor-α–induced hepatocyte apoptosis 374
Osteochondrogenesis, Cultivation of rat marrow-derived mesenchymal stem cells in reduced oxygen tension: effects on in vitro and in vivo 345

P

P2 receptor-evoked DNA synthesis in thyroid FRTL-5 cells, Mechanisms of 166
$P2Y_2$ nucleotide receptor signaling in human monocytic cells: activation, desensitization, and coupling to mitogen-activated protein kinases 196
p38 Mitogen activated protein kinase, IL-1- and TNF-induced bone resorption is mediated by 294
Patriotis, Christos, Maria G. Russeva, Jun-Hsiang Lin, Srinivasa M. Srinivasula, Dessislava Z. Markova, Christos Tsatsanis, Antonios Makris, Emad S. Alnemri, and Philip N. Tsichlis. Tpl-2 induces apoptosis by promoting the assembly of protein complexes that contain caspase-9, the adapter protein Tvl-1, and procaspase-3 176
$PC3^{TIS21/BTG2}$, the gene prototype member of the PC3/BTG/TOB family: regulator in control of cell growth, differentiation, and DNA repair 155
Pellerin, Isabelle, Marie Leclerc, David Claveau, Johanne Mailloux, and Michèle G. Brunette. Roles of ATP and cytoskeleton in the regulation of Na^+/H^+ exchanger along the nephron luminal membrane 109
Phosphoinositide-3 kinase but not the nitric oxide synthase pathways, Pleiotrophin induces angiogenesis: involvement of the 59
Pickering, J. Geoffrey. See Karkanis, Tom 244
Pleiotrophin induces angiogenesis: involvement of the phosphoinositide-3 kinase but not the nitric oxide synthase pathways 59
Postmenopausal mouse model, Estrogen and estrogen plus progestin act directly on the mammary gland to increase proliferation in a 81
Procaspase-3, Tpl-2 induces apoptosis by promoting the assembly of protein complexes that contain caspase-9, the adapter protein Tvl-1, and 176
Progestin act directly on the mammary gland to increase proliferation in a postmenopausal mouse model, Estrogen and estrogen plus 81
Protein Kinase Cα extracellular matrix remodeling, and cell–matrix interaction for transforming growth factorβ-regulated expression of E-cadherin and catenins, Requirement of 188

R

Raafat, Ahmed M., Songjiang Li, Jessica M. Bennett, Lorne J. Hofseth, and Sandra Z. Haslam. Estrogen and estrogen plus progestin act directly on the mammary gland to increase proliferation in a postmenopausal mouse model . 81
Raulais, Daniel. See Souttou, Boussad 59
Rb transcriptional regulation, Ebp1, an ErbB-3 binding protein, interacts with Rb and affects 209
Reactive oxygen species in D-galactosamine-induced sensitization against tumor necrosis factor-α–induced hepatocyte apoptosis, Possible involvement of 374
Receptor-channel coupling compared in contractile and proliferative human vascular smooth muscle, Functional 244
Reddy, S.V. See Gazitt, Y. 124
Regitz-Zagrosek, Vera. See Staufenberger, Sibylle 326
Regulatory volume decrease (RVD) by isolated and in situ bovine articular chondrocytes 304
Retinoic acid and TGF-β in cultured fibroblasts, Regulation of α-smooth muscle actin and CRBP-1 expression by 315
Riabowol, Karl. See Wheaton, Keith 226
Rieman, David J. See Kumar, Sanjay 294
Robbins, Stephen. See Wheaton, Keith 226
Roti, J.L. Roti. See VanderWaal, R.P. 236
Russeva, Maria G. See Patriotis, Christos 176

S

Sampsel, Kari. See Wheaton, Keith 226
Sampson, Sanford R. See Sharabani-Yosef, Orna 365
Sabanov, V. See Doroshenko, P. 65
Saito, Hidetsugu. See Nakamura, Mitsuyasu 392
Saito, Yoshimasa. See Nakamura, Mitsuyasu 392
Santiago-Pérez, Laura I., Rosa V. Flores, Cynthia Santos-Berríos, Nataliya E. Chorna, Brent Krugh, Richard C. Garrad, Laurie Erb, Gary A Weisman, and Fernando A. González. $P2Y_2$ nucleotide receptor signaling in human monocytic cells: activation, desensitization and coupling to mitogen-activated protein kinases 196
Santos-Berríos, Cynthia. See Santiago-Pérez, Laura I 196
Savage, Joyce M., Albert C. Gilotti, Catherine A. Granzow, Felix Molina, and Linda J. Lowe-Krentz. Antibodies against a putative heparin receptor slow cell proliferation and decrease MAPK activation in vascular smooth muscle cells 283
Schönherr, Elke, Liliana Schaefer, Brian C. O'Connell, and Hans Kresse. Matrix metalloproteinase expression by endothelial cells in collagen lattices changes during co-culture with fibroblasts and upon induction of decorin expression 37
Schaefer, Liliana. See Schönherr, Elke 37
Schorb, Winfried. See Staufenberger, Sibylle 326
Shafiq, Saiyid A. See Zaugg, Michael 90
Sharabani-Yosef, Orna, Asia Bak, Uri Nir, and Sanford R. Sampson. Na^+/K^+ pump expression in the L8 rat myogenic cell line: effects of heterologous α subunit transfection 365
Shefer, Gavriela, Uri Oron, Andrey Irintchev, Anton Wernig, and Orna Halevy. Skeletal muscle cell activation by low-energy laser irradiation: a role for the MAPK/ERK pathway 73
Siddiqui, M.A.Q. See Zaugg, Michael 90
Simon, Joseph. See Ekokoski, Elina 166
Sims, Stephen M. See Karkanis, Tom 244
Smad3 are correlated with increased collagen gene transcription in activated hepatic stellate cells, Constitutive phosphorylation and nuclear localization of 117
Souttou, Boussad, Daniel Raulais, and Marc Vigny. Pleiotrophin induces angiogenesis: involvement of the phosphoinositide-3 kinase but not the nitric oxide synthase pathways 59
S-phase progression rescues cells from heat-induced hypertoxicity, Delaying 236
Srinivasula, Srinivasa M. See Patriotis, Christos 176
Staufenberger, Sibylle, Martina Jacobs, Katja Brandstätter, Mathias Hafner, Vera Regitz-Zagrosek, Georg Ertl, and Winfried Schorb. Angiotensin II type1 receptor regulation and differential trophic effects on rat cardiac myofibroblasts after acute myocardial infarction 326
Susan, P.P. and W.A. Dunn, Jr. Starvation-induced lysosomal degradation of aldolase B requires glutamine 111 in a signal sequence for chaperone-mediated transport 48

T

Takagi, Tamako. See Nakamura, Mitsuyasu 392
Takehara, Kazuhiko. See Inagaki, Yutaka 117
Telomerase activity in human liver cancer cells by a histone deacetylase inhibitor, Reduction of 392
TGF-β/BMP signaling, Divergence and convergence of 265
TGF-β, Regulation of α-smooth muscle actin and CRBP-1 expression by retinoic acid and in cultured fibroblasts ... 315
Thyroid FRTL-5 cells, Mechanisms of P2 receptor-evoked DNA synthesis in 166
Tirone, Felice. The gene $PC3^{TIS21/BTG2}$, prototype member of the PC3/BTG/TOB family: regulator in control of cell growth, differentiation, and DNA repair 155
Törnquist, Kid. See Ekokoski, Elina 166
Tpl-2 induces apoptosis by promoting the assembly of protein complexes that contain caspase-9, the adapter protein Tvl-1, and procaspase-3 176
TNF-Induced necrosis of murine L929 fibrosarcoma cells via caspase-regulated production of reactive oxygen intermediates, Febrile and acute hyperthermia enhance 256
TNF-Induced and bone resorption is mediated by p38 mitogen activated protein kinase, IL-1- 294
Transforming growth factor-β receptor type II-defect by human chromosome 3 transfer in human colorectal carcinoma cells, Growth inhibition due to complementation of 356
Transforming growth factorβ-regulated expression of E-cadherin and catenins, Requirement of protein kinase Cα, extracellular matrix remodeling, and cell–matrix interaction for 188
Tsatsanis, Christos. See Patriotis, Christos 176
Tsichlis, Philip N. See Patriotis, Christos 176
Tumor necrosis factor-α–induced hepatocyte apoptosis, Possible involvement of reactive oxygen species in D-galactosamine-induced sensitization against 374

U

Ubiquitin-mediated proteolysis of vertebrate G1- and S-phase regulators 1
Uchida, Iichiro. See Miyafuji, Yasunori 356

V

VanderWaal, R.P., C.L. Griffith, W.D. Wright, M.J. Borrelli, and J.L. Roti Roti. Delaying S-phase progression rescues cells from heat-induced S-phase hypertoxicity 236
Vigny, Marc. See Souttou, Boussad 59
Votta, Bartholomew J. See Kumar, Sanjay 294

W

Wakabayashi, Kanji. See Nakamura, Mitsuyasu 392
Wang, Hongmei and Subhas Chakrabarty. Requirement of protein kinase Cα, extracellular matrix remodeling, and cell–matrix interaction for transforming growth factorβ-regulated expression of E-cadherin and catenins 188
Webb, Tania E. See Ekokoski, Elina 166
Weidner, D. See Leroux, E. 256
Weisman, Gary A. See Santiago-Pérez, Laura I. 196
Wernig, Anton. See Shefer, Gavriela 73
Wheaton, Keith, Kari Sampsel, Francois-Michel Boisvert, Alice Davy, Stephen Robbins, and Karl Riabowol. Loss of functional caveolae during senescence of human fibroblasts 226
Wright, W.D. See VanderWaal, R.P. 236
Wu, Z.Y. See Leroux, E. 256

X

Xia, Xianmin, Aiwu Cheng, Tracy Lessor, Yuexing Zhang, and Anne W. Hamburger. Ebp1, an ErbB-3 binding protein, interacts with Rb and affects Rb transcriptional regulation 209
Xiao, Shaohua, Felicia Houser-Scott, and David R. Engelke. Eukaryotic ribonuclease P: increased complexity to cope with the nuclear pre-tRNA pathway 11
Xu, Guoxiong, Marie-Luce Bochaton-Piallat, Daniele Andreutti, Robert B. Low, Giulio Gabbiani, and Pascal Neuville. Regulation of α-smooth muscle actin and CRBP-1 expression by retinoic acid and TGF-β in cultured fibroblasts 315
Xu, Weimin. See Zaugg, Michael 90

Y

Yamada, Yasuhiro. See Osawa, Yosuke 374
Yang, J. See Gazitt, Y. 124
Yew, P. Renee. Ubiquitin-mediated proteolysis of vertebrate G1- and S-phase regulators 1

Z

Zaugg, Michael, Nasir Z. Jamali, Eliana Lucchinetti, Weimin Xu, Mahmood Alam, Saiyid A. Shafiq, and M.A.Q. Siddiqui. Anabolic-androgenic steroids induce apoptotic cell death in adult rat ventricular myocytes 90
Zhang, Yuexing. See Xia, Xianmin 209
Zhong, Xiaoling. See Miyafuji, Yasunori 356

JOURNAL OF CELLULAR PHYSIOLOGY

ORIGINALLY FOUNDED BY THE WISTAR INSTITUTE

CLAUDIO BASILICO, *Editor-in-Chief*
New York University Medical Center • Department of Microbiology
550 First Avenue, MSB-256 • New York, New York 10016

EDITORS

ROLAND BARON
Depts. of Orthopedics and Cell Biology
Yale University
School of Medicine
333 Cedar Street
New Haven, CT 06510

PAOLO M. COMOGLIO
Institute for Research and
Treatment of Cancer (IRCC)
Department of Biomedical Sciences
Strada Provincale 142, km 3.95
10060 Candiolo (TO), Italy

ANTONIO GIORDANO
Department of Pathology
Jefferson Medical College
1020 Locust Street
Room 266
Philadelphia, PA 19107

KOHEI MIYAZONO
The Cancer Institute
Japanese Foundation for Cancer Research
1-37-1 Kami-ikebukuro
Toshima-ku
Tokyo 170, Japan

HARVEY L. OZER
Department of Microbiology and
Molecular Genetics
UMDNJ–New Jersey Medical School
185 South Orange Avenue
Newark, NJ 07103-2714

DANIEL B. RIFKIN
Department of Cell Biology
New York University Medical Center
550 First Avenue, MSB-650
New York, NY 10016

KENNETH M. YAMADA
Laboratory of Developmental Biology
Building 30, Room 414
National Institute of Dental Health
NIH-Bethesda, MD 20892

REVIEWS EDITOR: ANTONIO GIORDANO

EDITORIAL BOARD

PAOLO AMATI
JUDY CAMPISI
LAWRENCE A. CHASIN
STEPHEN C. CLARK
DAVID CLEMMONS
VINCENT J. CRISTOFALO
DENNIS D. CUNNINGHAM
TOM CURRAN
VITTORIO DEFENDI
RIK DERYNCK
GIULIO DRAETTA
DENISE GALLOWAY
DAVID GURWITZ
CARL-HENRIK HELDIN
LAWRENCE E. HIGHTOWER
LUIS JIMENEZ DE ASUA
VICTOR LING
DANIEL LOUVARD
EUGENE MARCANTONIO
JOAN MASSAGUE
DONALD METCALF
G.K. MICHALOPOULOS
PAUL NEIMAN
EISUKE NISHIDA
PIER GIUSEPPE PELICCI
JACQUES POUYSSEGUR
CAROL PRIVES
ULF RAPP
GIOVANNI ROVERA
ENRIQUE ROZENGURT
JOSEPH SCHLESSINGER
ERIC STANBRIDGE
GARY S. STEIN
SHOICHIRO TSUKITA
AXEL ULLRICH
JAN T. VILCEK
MITCHEL VILLEREAL

COPYRIGHT © 2001 BY WILEY-LISS, INC.
All Rights Reserved

VOLUME 187
APRIL, MAY, JUNE 2001

VOL. 187 APRIL 2001 No. 1

CONTENTS

REVIEW ARTICLES

P. RENEE YEW. Ubiquitin-Mediated Proteolysis of Vertebrate G1- and S-Phase Regulators 1

SHAOHUA XIAO, FELICIA HOUSER-SCOTT, AND DAVID R. ENGELKE. Eukaryotic Ribonuclease P: Increased Complexity to Cope With the Nuclear Pre-tRNA Pathway 11

OLGA GRECO AND GABI U. DACHS. Gene Directed Enzyme/Prodrug Therapy of Cancer: Historical Appraisal and Future Prospectives 22

RESEARCH ARTICLES

ELKE SCHÖNHERR, LILIANA SCHAEFER, BRIAN C. O'CONNELL, AND HANS KRESSE. Matrix Metalloproteinase Expression by Endothelial Cells in Collagen Lattices Changes During Co-Culture With Fibroblasts and Upon Induction of Decorin Expression 37

P.P. SUSAN AND W.A. DUNN, JR. Starvation-Induced Lysosomal Degradation of Aldolase B Requires Glutamine 111 in a Signal Sequence for Chaperone-Mediated Transport 48

BOUSSAD SOUTTOU, DANIEL RAULAIS, AND MARC VIGNY. Pleiotrophin Induces Angiogenesis: Involvement of the Phosphoinositide-3 Kinase but Not the Nitric Oxide Synthase Pathways 59

P. DOROSHENKO, V. SABANOV, AND N. DOROSHENKO. Cell Cycle-Related Changes in Regulatory Volume Decrease and Volume-Sensitive Chloride Conductance in Mouse Fibroblasts 65

GAVRIELA SHEFER, URI ORON, ANDREY IRINTCHEV, ANTON WERNIG, AND ORNA HALEVY. Skeletal Muscle Cell Activation by Low-Energy Laser Irradiation: A Role for the MAPK/ERK Pathway 73

AHMED M. RAAFAT, SONGJIANG LI, JESSICA M. BENNETT, LORNE J. HOFSETH, AND SANDRA Z. HASLAM. Estrogen and Estrogen Plus Progestin Act Directly on the Mammary Gland to Increase Proliferation in a Postmenopausal Mouse Model 81

MICHAEL ZAUGG, NASIR Z. JAMALI, ELIANA LUCCHINETTI, WEIMIN XU, MAHMOOD ALAM, SAIYID A. SHAFIQ, AND M.A.Q. SIDDIQUI. Anabolic-Androgenic Steroids Induce Apoptotic Cell Death in Adult Rat Ventricular Myocytes 90

RUBEN CONEJO AND MARGARITA LORENZO. Insulin Signaling Leading to Proliferation, Survival, and Membrane Ruffling in C2C12 Myoblasts 96

ISABELLE PELLERIN, MARIE LECLERC, DAVID CLAVEAU, JOHANNE MAILLOUX, and MICHÈLE G. BRUNETTE. Roles of ATP and Cytoskeleton in the Regulation of Na^+/H^+ Exchanger Along the Nephron Luminal Membrane 109

YUTAKA INAGAKI, MIZUKO MAMURA, YUTAKA KANAMARU, PATRICIA GREENWEL, TOMOYUKI NEMOTO, KAZUHIKO TAKEHARA, PETER TEN DIJKE, AND ATSUHITO NAKAO. Constitutive Phosphorylation and Nuclear Localization of Smad3 Are Correlated With Increased Collagen Gene Transcription in Activated Hepatic Stellate Cells ... 117

Y. GAZITT, S.V. REDDY, O. ALCANTARA, J. YANG, AND D.H. BOLDT. A New Molecular Role for Iron in Regulation of Cell Cycling and Differentiation of HL-60 Human Leukemia Cells: Iron Is Required for Transcription of p21(WAF1/CIP1) in Cells Induced by Phorbol Myristate Acetate 124

VOL. 187 MAY 2001 No. 2

CONTENTS

REVIEW ARTICLES

ALFONSO BELLACOSA. Role of *MED1* (*MBD4*) Gene in DNA Repair and Human Cancer 137

GABRIELE AQUILINA AND MARGHERITA BIGNAMI. Mismatch Repair in Correction of Replication Errors and Processing of DNA Damage 145

FELICE TIRONE. The Gene $PC3^{TIS21/BTG2}$, Prototype Member of the PC3/BTG/TOB Family: Regulator in Control of Cell Growth, Differentiation, and DNA Repair? 155

ORIGINAL ARTICLES

ELINA EKOKOSKI, TANIA E. WEBB, JOSEPH SIMON, AND KID TÖRNQUIST. Mechanisms of P2 Receptor-Evoked DNA Synthesis in Thyroid FRTL-5 Cells 166

CHRISTOS PATRIOTIS, MARIA G. RUSSEVA, JUN-HSIANG LIN, SRINIVASA M. SRINIVASULA, DESSISLAVA Z. MARKOVA, CHRISTOS TSATSANIS, ANTONIOS MAKRIS, EMAD S. ALNEMRI, AND PHILIP N. TSICHLIS. Tpl-2 Induces Apoptosis by Promoting the Assembly of Protein Complexes That Contain Caspase-9, the Adapter Protein Tvl-1, and Procaspase-3 176

HONGMEI WANG AND SUBHAS CHAKRABARTY. Requirement of Protein Kinase Cα, Extracellular Matrix Remodeling, and Cell–Matrix Interaction for Transforming Growth Factorβ-Regulated Expression of E-Cadherin and Catenins 188

LAURA I. SANTIAGO-PÉREZ, ROSA V. FLORES, CYNTHIA SANTOS-BERRÍOS, NATALIYA E. CHORNA, BRENT KRUGH, RICHARD C. GARRAD, LAURIE ERB, GARY A. WEISMAN, AND FERNANDO A. GONZÁLEZ. $P2Y_2$ Nucleotide Receptor Signaling in Human Monocytic Cells: Activation, Desensitization, and Coupling to Mitogen-Activated Protein Kinases 196

XIANMIN XIA, AIWU CHENG, TRACY LESSOR, YUEXING ZHANG, AND ANNE W. HAMBURGER. Ebp1, an ErbB-3 Binding Protein, Interacts With Rb and Affects Rb Transcriptional Regulation 209

ALLISON M. KITTEN AND CARRIE J. ANDREWS. Endothelin-1 Expression in Long-Term Cultures of Fetal Rat Calvarial Osteoblasts: Regulation by BMP-7 218

KEITH WHEATON, KARI SAMPSEL, FRANCOIS-MICHEL BOISVERT, ALICE DAVY, STEPHEN ROBBINS, AND KARL RIABOWOL. Loss of Functional Caveolae During Senescence of Human Fibroblasts 226

R.P. VANDERWAAL, C.L. GRIFFITH, W.D. WRIGHT, M.J. BORRELLI, AND J.L. ROTI ROTI. Delaying S-Phase Progression Rescues Cells from Heat-Induced S-Phase Hypertoxicity 236

TOM KARKANIS, YANG JIAO, BERNARD R. HURLEY, SHAOHUA LI, J. GEOFFREY PICKERING, AND STEPHEN M. SIMS. Functional Receptor-Channel Coupling Compared in Contractile and Proliferative Human Vascular Smooth Muscle 244

E. LEROUX, E. AUZENNE, D. WEIDNER, Z.Y. WU, N.J. DONATO, AND J. KLOSTERGAARD. Febrile and Acute Hyperthermia Enhance TNF-Induced Necrosis of Murine L929 Fibrosarcoma Cells via Caspase-Regulated Production of Reactive Oxygen Intermediates 256

VOL. 187 JUNE 2001 No. 3

CONTENTS

REVIEW ARTICLES

KOHEI MIYAZONO, KIYOSHI KUSANAGI, AND HIROFUMI INOUE. Divergence and Convergence of TGF-β/BMP Signaling 265

ANDREW J. GOW AND HARRY ISCHIROPOULOS. Nitric Oxide Chemistry and Cellular Signaling 277

ORIGINAL ARTICLES

JOYCE M. SAVAGE, ALBERT C. GILOTTI, CATHERINE A. GRANZOW, FELIX MOLINA, AND LINDA J. LOWE-KRENTZ. Antibodies Against a Putative Heparin Receptor Slow Cell Proliferation and Decrease MAPK Activation in Vascular Smooth Muscle Cells 283

SANJAY KUMAR, BARTHOLOMEW J. VOTTA, DAVID J. RIEMAN, ALISON M. BADGER, MAXINE GOWEN, AND JOHN C. LEE. IL-1- and TNF-Induced Bone Resorption Is Mediated by p38 Mitogen Activated Protein Kinase 294

PETER G. BUSH AND ANDREW C. HALL. Regulatory Volume Decrease (RVD) by Isolated and In Situ Bovine Articular Chondrocytes 304

GUOXIONG XU, MARIE-LUCE BOCHATON-PIALLAT, DANIELE ANDREUTTI, ROBERT B. LOW, GIULIO GABBIANI, AND PASCAL NEUVILLE. Regulation of α-Smooth Muscle Actin and CRBP-1 Expression by Retinoic Acid and TGF-β in Cultured Fibroblasts 315

SIBYLLE STAUFENBERGER, MARTINA JACOBS, KATJA BRANDSTÄTTER, MATHIAS HAFNER, VERA REGITZ-ZAGROSEK, GEORG ERTL, AND WINFRIED SCHORB. Angiotensin II Type1 Receptor Regulation and Differential Trophic Effects on Rat Cardiac Myofibroblasts After Acute Myocardial Infarction 326

CHOW H. LEE AND ANTHONY M. EDWARDS. Stimulation of DNA Synthesis by Tumor Promoters in Primary Rat Hepatocytes Is Not Mediated by Arachidonic Acid Metabolites 336

DONALD P. LENNON, JOHN M. EDMISON, AND ARNOLD I. CAPLAN. Cultivation of Rat Marrow-Derived Mesenchymal Stem Cells in Reduced Oxygen Tension: Effects on In Vitro and In Vivo Osteochondrogenesis 345

YASUNORI MIYAFUJI, XIAOLING ZHONG, IICHIRO UCHIDA, MINORU KOI, AND HIROMICHI HEMMI. Growth Inhibition Due to Complementation of *Transforming Growth Factor-β Receptor Type II*-Defect by Human Chromosome 3 Transfer in Human Colorectal Carcinoma Cells 356

ORNA SHARABANI-YOSEF, ASIA BAK, URI NIR, AND SANFORD R. SAMPSON. Na^+/K^+ Pump Expression in the L8 Rat Myogenic Cell Line: Effects of Heterologous Subunit Transfection 365

YOSUKE OSAWA, MASAHITO NAGAKI, YOSHIKO BANNO, YASUHIRO YAMADA, MOTOAKI IMOSE, YOSHINORI NOZAWA, HISATAKA MORIWAKI, AND SHIGERU NAKASHIMA. Possible Involvement of Reactive Oxygen Species in D-Galactosamine–Induced Sensitization Against Tumor Necrosis Factor-α–Induced Hepatocyte Apoptosis 374

KONSTANTIN KRASAGAKIS, BRIGITTE ALMOND-ROESLER, CHRISTOPH GEILEN, SABINE FIMMEL, SVEN KRENGEL, EKATERINI CHATZAKI, ACHILLE GRAVANIS, AND CONSTANTIN E. ORFANOS. Growth and Characterization of a Cell Line From a Human Primary Neuroendocrine Carcinoma of the Skin (Merkel Cell Carcinoma) in Culture and as Xenograft 386

MITSUYASU NAKAMURA, HIDETSUGU SAITO, HIROTOSHI EBINUMA, KANJI WAKABAYASHI, YOSHIMASA SAITO, TAMAKO TAKAGI, NOBUHIRO NAKAMOTO, AND HIROMASA ISHII. Reduction of Telomerase Activity in Human Liver Cancer Cells by a Histone Deacetylase Inhibitor 392

Index to Volume 187 469